



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,790	02/09/2006	Hironobu Nagoh	1691-0215PUS1	2691
2292 7590 02/19/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER BERNSHTEYN, MICHAEL				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
02/19/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/567,790

**Applicant(s)**

NAGOH ET AL.

**Examiner**

MICHAEL M. BERNSTEYN

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)  
Paper No(s)/Mail Date 10/16/06, 05/09/06, 02/09/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-6 and 12 of copending Application No. 10/485,896.

Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is drawn to curable coating composition and photochromic article, wherein the composition is derived from radically polymerizable monomers, including radically polymerizable monomers containing silanol groups or groups that yield silanol groups through hydrolysis, a radically polymerizable epoxy compound, and a photochromic compound.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Momoda et al. (U.S. Patent Application Publication 20030036579).

With regard to the limitations of claims 1 and 2, Momoda discloses a photochromic cured product which has excellent **photochromism** such as high color density and high fading speed, excellent adhesion to a hard coat and high striping work efficiency. This cured product is obtained by polymerizing and curing a curable composition which comprises (A) a polyfunctional polymerizable monomer such as trimethylolpropane trimethacrylate, (B) a **silyl monomer** such as  $\gamma$ -methacryloyloxypropyl trimethoxysilane, (C) another radically polymerizable monomer and (D) a **photochromic** compound. As for the contents of the polymerizable monomers, the content of the component (A) is 1 to 50 wt %, the content of the component (B) is 0.5 to 20 wt % and the balance consists of the component (C) based on the total of the components (A), (B) and (C). The photochromic compound (D) is contained in an amount of 0.0001 to 10 parts by weight based on 100 parts by weight of the total of the components (A), (B) and (C) (abstract) The content of components (B),

(C) and (D) which correspond accordingly to the claimed components (1), (2) and (3) are within the claimed ranges.

With regard to the limitations of claims 3 and 5, Momoda discloses that obtained photochromic cured product has excellent releasability when it is removed from a mold after molding and excellent adhesion to a coating film formed by applying a hard coat agent and curing it by the above condensation method. The above hard coat agent is generally used to improve the scratch resistance of the cured product (page 11, [0110], [0111]).

With regard to the limitations of claim 4, Momoda discloses that since the photochromic cured product has excellent features, it is extremely useful as an **optical material** such as a photochromic lens material (page 17, [0155]).

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Momota et al. (JP 2003-128713).

With regard to the limitations of claims 1 and 2, Momota discloses that a curable composition contains a photo-base generation compound, a radically polymerizable monomer having epoxy group such as glycidyl methacrylate and a photochromic compound such as a chromene compound (abstract).

Momota discloses that in using hardenability constituent as a coating material, it is preferred to use together a radical polymerization nature monomer which has a basis which generates a silanol group by a silanol group or hydrolysis as the above and a radical polymerization nature monomer in addition to a radical polymerization nature monomer which has an epoxy group. By blending such a radical polymerization nature

monomer, an adhesive property with a hard court layer used in order to have excelled adhesion with a substrate more and to cover a photochromic coating layer further if needed is also remarkably improvable (page 8, [0041]).

Momota discloses that the content of silicon compound should be preferably from 1 to 20 parts (page 11, [0057]), and the photochromic compound preferably from 0.01 to 20 parts (page 16, [0080] for 100 parts by weight of the radically polymerizable monomer, which are within the claimed ranges.

With regard to the limitations of claims 3-5, Momota discloses that obtained photochromic cured composition is suitable as a coating material having excellent adhesivity to a substrate of an eyeglass lens, etc., and having good stability even by storing in a one-pack state (abstract).

4. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadowaki (WO 02/93236 or U.S. Patent Application Publication 2004/0109133).

The U.S. Patent Application Publication 2004/0109133 is equivalent to the WO 02/93236; therefore, the following rejection is based upon the context of U.S. Patent Application Publication 2004/0109133.

With regard to the limitations of claims 1-5, Kadowaki discloses a method of manufacturing plastic photochromic lenses characterized by comprising the steps of: obtaining a lens by polymerizing and curing a monomer mixture comprising at least (1), (2), and (3) below; directing radiation comprising ultraviolet radiation of a wavelength of less than or equal to 300 nm onto at least a portion of the surface of the lens obtained;

coating a composition comprising (4) and (5) below onto the surface of the lens that has been exposed to said radiation; and curing said coating to obtain a hard surface film: (1) a monofunctional or bifunctional methacrylic ester monomer comprising 50 weight percent or more of the monomer mixture; (2) a trifunctional or greater methacrylic ester monomer comprising 1 to 30 weight percent or more of the monomer mixture; (3) one or more photochromic dyes; (4) an organic **silicon compound** comprising an alkoxy group and an **epoxy group**; and (5) a colloidal metal oxide. A plastic photochromic lens obtained by the above manufacturing method (abstract).

The amount of the silicon compound is within the claimed range (page 4, [0062]).

The total quantity of photochromic dye that is added is not specifically limited. In consideration of the high transmittance during color fading and suitable degree of light blocking during coloration that are required of eyeglass lenses, the quantity of dye added is preferably set within a range of from 0.001 to 1.0 weight part per 100 weight parts of monomer mixture, which is within the claimed range (page 2, [0030]).

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momoda et al. (U.S. Patent Application Publication 2005/0109133 or WO 01/05854) in view of Chen et al. (WO 99/38924).

With regard to the limitations of claims 1-5, Momoda discloses curable photochromic compositions and photochromic articles derived from the curable compositions, wherein the curable composition comprises a photochromic compound and acrylate and epoxy monomers that correspond to applicants' claimed polymerizable monomers and epoxy compound (abstract; pages 10-35). It is further noted that the

reference teaches that additional components, including other polymerizable monomers, may be incorporated within the curable composition.

Though the primary reference is silent with respect to the instantly claimed silanol or silanol-yielding group compounds, the position is taken that each of these compounds was a well-known constituent of polymeric photochromic compositions at the time of invention. Chen discloses UV curable photochromic coating compositions, wherein adhesion promoters such as radically polymerizable silane containing monomers are utilized in amounts of 0.001% to 20% by weight, based on the total weight of the composition (excluding solvents) (page 27, line 21 through page 29, line 30) .

Therefore, since the claimed silanol or silanol-yielding compounds are known to be useful within photochromic compositions at the time of invention, one would have been motivated to utilize them for their art recognized function as taught by Chen within the photochromic compositions of Momoda. It has been held that it is *prima facie* obvious to utilize a known compound for its art recognized function. *In re Linder*, 173 USPQ 356. *In re Dial* et al., 140 USPQ 244.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/  
Examiner, Art Unit 1796

/M. M. B./  
Examiner, Art Unit 1796